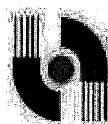


MULTIMEDIA



UNIVERSITY

STUDENT ID NO

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FINAL EXAMINATION

TRIMESTER 1, 2017 / 2018

LCT2017 – COMMUNICATION TECHNOLOGIES
(All Groups)

11 OCTOBER 2017
9:00 a.m. – 11:00 a.m.
2 hours

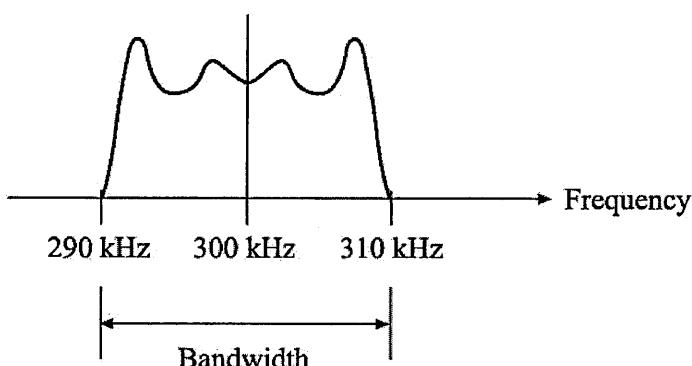
INSTRUCTIONS TO STUDENTS

1. This question paper consists of **2** printed pages with **2** sections only.
2. Answer **ALL** questions in **Section A** and **Section B**.
3. Write your answers for all sections in the Answer Booklet provided.

SECTION A: FUNDAMENTALS OF COMMUNICATION TECHNOLOGIES (15 MARKS)

Instructions: Answer all questions

1. In general, for any application, there are two types of communication systems that consist of a source, a destination and a channel. Identify and describe the two systems with an appropriate example for each. (4 marks)
2. For radio applications, there are three types of communication systems available. List and describe these three types of communication systems. (3 marks)
3. The diagram below shows the frequency spectrum of a signal.



Using the diagram above, describe bandwidth. (4 marks)

4. The first commercial wireless mobile cellular technology was launched in Japan in 1979. Subsequently, wireless mobile phone communication can be classified into four generations of technology revolution.

Discuss the second and the third generation of wireless communications technology. (4 marks)

SECTION B: USAGE OF COMMUNICATION TECHNOLOGIES (25 MARKS)

Instructions: Answer all questions.

1. 4G Long-Term Evolution (LTE) is the fourth major generation of mobile network technology. Its bandwidth, latency and capacity offer the promise that network connectivity will no longer be a barrier to the benefits of high performance mobile applications. Majority of businesses using LTE in the United States reported an increase in productivity – with externally-focused departments, such as Sales and Customer Services, benefiting most. As this connectivity becomes more powerful and commonplace, the number of tasks that can be done with a smartphone or cellular-enabled tablet rises to unforeseen levels, ensuing near constant connectivity and pushing out-of-band access to new heights.

However, despite the myriad benefits 4G LTE offers, many businesses have yet to fully adopt the technology, incorrectly thinking cellular Internet connectivity is just for watching

Continued...

movies or streaming music while on the go. This is an incorrect mindset to have, as 4G can revolutionize how business is run.

Describe five benefits of 4G LTE on organisations or companies. (10 marks)

2. Even a cursory glance at newspapers, magazines or the television is sufficient for even a casual observer to notice the amount of reporting relating to Web 2.0 social media. Social media has broken stories about terrorist attacks in India, a shark attack off the West Coast of South Africa and was extensively exploited during the Arab Spring uprisings. It has become the constant companion of high-profile personalities and also of a large majority of the online population. Facebook, the world's largest online social network, has approximately one billion users, which is exceeded only by the populations of China and India. The microblogging site Twitter recorded tweets at the rate of 25,088 per second during the screening of an anime movie in December 2011 (Akimoto, 2011); social networking companies are amongst the fastest growing and these social networking sites are regularly cited as the most searched for and viewed sites on the Internet (Most Popular Websites, 2013).

The extensiveness of social media has created a universal system of cooperation and collaboration enclosed in a socially connected Web that supports all users' capacity to generate content. The universal nature of social media is what makes the Internet a strategic imperative in public-led socio-political campaigns. Social media has become an important tool in the arsenal of civil society organisations (CSOs) and indeed much of the success of a new and growing civil society appears to be its ability to adopt and exploit new emerging technologies (Anheier, Glasius & Kaldor 2001; Castells 2004).

Describe the impacts of social media on the following areas in Malaysia:

- a) politics (5 marks)
- b) business (5 marks)
- c) socialization (5 marks)

(15 marks)

End of Paper